

DRAFT AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/067,935

REMARKS

Claims 1-5 are all the claims pending in the application. Claims 1-5 presently stand rejected.

Claims 1-5 are rejected under 35 U.S.C. § 112, second paragraph.

Claims 1, 2 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hosomi et al. (USP 5,820,068).

Claims 3 and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hosomi et al. (USP 5,820,068) in view of Sato (USP 6,502,784).

For the reasons set forth below, Applicant respectfully traverses the rejections and requests favorable disposition of the application.

Argument

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out the invention. The Examiner asserts that it is unclear what is being compared in regard to the first detector disposed closer to the first guide portion. In response, Applicant has amended claim 1. Applicant submits that claim 1 satisfies the requirements of 35 U.S.C. § 112.

In regard to the prior art rejection, the present invention relates to a printer capable of detecting the paper near end, e.g., the residual quantity of a roll of paper, with a single sensor, by

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disposing detectors at a position making the detectors workable when the printer is placed either vertically or horizontally.

Claims 1, 2 and 5 are again rejected under 35 U.S.C. §102 (b) as being anticipated by Hosomi, and claims 3 and 4 under §103(a) as being obvious over Hosomi in view of Sato.

Hosomi relates to a printer capable of disposing a near end sensor and a detection lever rotatably at a plurality of positions according to an installation state of the printer. The detection lever is provided with a detector and a protruding portion protruding toward a roll of paper. The detector is disposed in the vicinities of guide portions while rotating on a locus as a roll diameter of the recording paper becomes smaller. (see Fig. 3)

Sato relates to a paper roll remaining amount detecting unit which can adjust a position of a near end sensor by using a notch mechanism. The invention of Sato can operate plural kinds of paper rolls having different inner diameters.

The Examiner asserts that the detectors disclosed in Hosomi are disposed in "an area defined by three surfaces," although this cannot be clearly read from the specification of Hosomi.

In any event, the present invention is different from Hosomi at least in that the two detectors are disposed in response to the first guide portions and the second guide portions respectively. That is, the detectors of the present invention are disposed in response to the two side portions at a position where the detectors are disengaged from an end face of a roll of paper when the roll of paper is reduced in diameter.

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By having the above configuration, the detectors corresponding to each of the guide portions detect that a paper remaining amount is low without moving the detectors in either of the two installment states of the printer. Further, the operations of detectors are sensed by a single sensor.

On the other hand, both of the two detectors disclosed in Hosomi are provided so as to detect the paper to be retained into one of the guide portions. That is, one of two detectors detects a space in a core portion of the paper, and the other one detects the end face of the paper to be retained into the guide portion. Therefore, the configuration disclosed in Hosomi requires movement of the switch and the detectors when detecting paper to be retained into the other of guide portions.

The present invention, by having the above configuration, can have an advantage in cost compared to the reference as operations of two detectors can be sensed by using a single sensor. The present invention also has an advantage over that of Hosomi in allowing a user's handling of moving the detectors according to the installment states to be omitted.

Conclusion

In view of the foregoing remarks, the application is believed to be in form for immediate allowance with claims 1-5, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to **contact the undersigned** at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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